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ABSTRACT

This report contains the results of the 10th application of the Tennessee Technological University Teacher Evaluation Model and an overview of the previous reports on the model conducted since 1973. Information on graduates of the teacher education program is used for curriculum evaluation and long-range planning. In the first chapter, purposes and limitations of the study are discussed, and collecting procedures are described. Chapter II presents comparisons of second and third year followup participants who had received either the B.S. or M.A. degree. The third chapter presents and analyzes data for 1983 graduates and provides comparisons with 1980 and 1981 graduates. Chapter IV provides a summary of the report, conclusions, recommendations, and plans for the continuation of the study during 1983-84. Long-range planning proposals are also included. The appendix lists 68 reports and studies related to the teacher preparation programs of the university. (JD)

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STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 83-2

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL - YEAR X

MAY, 1983

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TABLE OF CONTENTS

	Page
ABSTRACT	iii
LIST OF TABLES	vii
LIST OF FIGURES	ix
PREFACE	xiii
Chapter	
I. INTRODUCTION AND PROCEDURES	1
Purposes	1
Limitations	2
Procedure	3
Selection of Subjects	3
Instrumentation	6
Training of Observers	8
Collection of Data	8
Analyses of Data	9
Summary	9
References	10
II. COMPARISONS OF SECOND AND THIRD YEAR FOLLOWUP PARTICIPANTS	11
Personal Variables	11
Principal's Ratings	12
Student Evaluations	12
Independent Observers	15
Flanders Interaction Analysis	15
Classroom Observation Record	15
Tuckman Teacher Feedback Form	17

Page

Discussion 17

Summary 19

III. PRESENTATION AND ANALYSES OF DATA FOR 1982 GRADUATES AND COMPARISONS WITH 1980 AND 1981 GRADUATES 21

Correlational Analyses 21

Comparison of B.S. and M.A. Graduates 24

Comparison of First Year B.S. Graduates 1980-82 29

Comparison of First Year M.A. Graduates 1980-82 33

Summary 37

IV. SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FUTURE PLANS 39

Summary 39

Conclusions 40

Use of the Evaluation Model 40

Evaluation of 1982 Graduates 40

Comparisons of Data Across Time 41

Recommendations 41

Plans for the Continuation of the Study During 1983-84 42

Long Range Plans 43

APPENDIX 45

STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 83-2

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL--YEAR X

Report Prepared by:

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Abstract

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL--YEAR X

In 1973 Tennessee Technological University developed and implemented a model for systematic data gathering and for making evaluations of the programs in teacher education. The specific objective of the use of the longitudinal model was the evaluation and subsequent modification and improvement of the programs for the preparation of teachers. During the tenth year (1982-83) of the operation of the project, three distinct groups of graduates who had completed either the B.S. or M.A., with major emphasis in a teaching field participated in the study. The sample size by year of graduation was as follows: 1980--19, 1981--25, and 1982--47. Detailed information was collected on each subject by use of standardized and locally developed instruments. The basic instruments have remained the same during the ten years of the operation of the model and included: (1) University records, (2) principals' evaluations, (3) the California F-Scale, (4) a measure of the satisfaction of the students of the graduates, and (5) observation in the classrooms of the subjects by trained observers using Flanders Interaction Analysis, the Classroom Observation Record and the Tuckman Teacher Feedback Form. All data obtained as a part of the study were classified, coded, and keypunched for analyses. Descriptive and comparative statistics were computed.

The major findings of the study for the first year subjects were similar to those reported in the past nine years of the study. Comparisons between the B.S. and M.A. graduates indicated few significant differences. However, the general trend indicated that those individuals with the M.A. were functioning at a higher level. Comparisons of 1982 graduates with those first year participants in 1980 and 1982 indicated few differences. It appeared that the 1982 graduates were similar to earlier graduates who had participated in the study. An examination of graduates who were in their second and third year of participation in the project, indicated that they were functioning at a level higher than first year graduates. This finding is probably due to the level of maturity and experience of the subjects in the study. Conclusions and recommendations were advanced from the results of the study that are being used to modify and improve the teacher education programs of the University.

Based on the results of the study and the applications that have been made in improving the teacher education programs of the University, the model has become a permanent operational feature of the College of Education. Initial plans are being made to modify the overall design of the model based on recent educational research on evaluation methodology and the characteristics of good teaching.

LIST OF TABLES

Table		Page
1.	Number of Subjects by Year of Graduation Participating in Each Phase of Study	5
2.	Sample for Intensive Followup--1982-83	5
3.	Comparison of Sample Sizes Across All Years of Study	6
4.	Number of Subjects by Date of Graduation and County in Which Teaching 1982-83	8
5.	Comparison of Weighted Commons Scores (NTE), American College Test Scores, and F-Scale Scores for Second and Third Year B.S. and M.A. Elementary Graduates	11
6.	Comparison of Weighted Commons Scores (NTE), American College Test Scores, and F-Scale Scores for Second and Third Year M.A. Secondary Graduates	12
7.	Comparison of Principals' Ratings for Second and Third Year B.S. and M.A. Elementary Graduates	13
8.	Comparison of Principals' Ratings for Second and Third Year M.A. Secondary Graduates	13
9.	Comparison of SET-I Scores for Second and Third Year M.A. Secondary Graduates	14
10.	Comparison of SET-II Scores for Second and Third Year B.S. and M.A. Elementary Graduates	14
11.	Comparison of Flanders Ratios for Second and Third Year B.S. and M.A. Elementary Graduates	15
12.	Comparison of Flanders Ratios for Second and Third Year M.A. Secondary Graduates	16
13.	Comparison of COR Factor Scores and Second and Third Year B.S. and M.A. Elementary Graduates	16
14.	Comparison of COR Factor Scores and Second and Third Year M.A. Secondary Graduates	17
15.	Comparison of Tuckman Ratings for Second and Third Year B.S. and M.A. Elementary Graduates	18

Table		Page
16.	Comparison of Tuckman Ratings for Second and Third Year M.A. Secondary Graduates	18
17.	Correlation Matrix for Selected Variables for 1982 B.S. Graduates	22
18.	Correlation Matrix for Selected Variables for 1982 M.A. Graduates	23
19.	Comparison of Mean ACT Composite Scores, Weighted Common Examinations Scores, and F-Scale Scores for 1982 B.S. and M.A. Graduates	24
20.	Comparison of Mean Principals' Ratings for 1982 B.S. and M.A. Graduates	25
21.	Comparison of Mean SET-I Scores for 1982 B.S. and M.A. Graduates	25
22.	Comparison of Mean SET-II Scores for 1982 B.S. and M.A. Graduates	26
23.	Comparison of Flanders Ratios for 1982 B.S. and M.A. Graduates	26
24.	Average Percentage of Time Spent by Subjects (at Various Grade Levels) Acting in Each of Ten Interaction Categories	27
25.	Comparison of Mean COR Factor Scores for 1982 B.S. and M.A. Graduates	28
26.	Comparison of Mean Tuckman Factor Scores for 1982 B.S. and M.A. Graduates	28
27.	Comparison of ACT Composite, Weighted Common Examinations Scores of the NTE, and F-Scale Scores for First Year B.S. Graduates 1980-82	29
28.	Comparison of Mean Principals Ratings for First Year B.S. Graduates 1980-82	30
29.	Comparison of Mean SET-I Scores for First Year B.S Graduates 1980-82	30
30.	Comparison of SET-II Scores for First Year B.S. Graduates 1980-82	31
31.	Comparison of Mean Flanders Ratios for First Year B.S. Graduates 1980-82	32

Table | Page

32. Comparison of Mean COR Scores for First Year B.S. Graduates 1980-82 32

33. Comparison of Mean Tuckman Scores for First Year B.S. Graduates 1980-82 32

34. Comparison of ACT Composite, Weighted Common Examinations Scores of the NTE, and F-Scale Scores for First Year M.A. Graduates 1980-82 33

35. Comparison of Mean Principals Ratings for First Year M.A. Graduates 1980-82 34

36. Comparison of Mean SET-I Scores for First Year M.A. Graduates 1980-82 34

37. Comparison of Mean SET-II Scores for First Year M.A. Graduates 1980-82 35

38. Comparison of Mean Flanders Ratios for First Year M.A. Graduates 1980-82 35

39. Comparison of Mean COR Scores for First Year M.A. Graduates 1979-81 36

40. Comparison of Mean Tuckman Scores for First Year M.A. Graduates 1980-82 36

LIST OF FIGURES

Figure		Page
1.	PERT Chart of Major Activities for 1982-83	4
2.	Number of Participants by County in 1982-83 Phase of the Study	7

PREFACE

Followup evaluation has been an integral part of the teacher education programs of Tennessee Technological University for the past 13 years. Followup studies of all graduates have been conducted on a regular basis and special studies have been carried out to provide input for the overall operation of the programs of the University. In 1973, a longitudinal model was developed and implemented for conducting followup evaluations. During 1982-83 this model was used for the tenth year to gather data. The application of the model is believed to be one of the longest on-going teacher evaluation projects in the nation. The project has received national recognition as an exemplary program for teacher evaluation.

The purpose of this report was to present the findings of the tenth year of the application of the model. The report is by no means complete, however, it serves to inform the reader of the basic procedures used and the preliminary findings of the tenth year of the study. In order to conserve resources, only essential information was presented. Readers of the report are invited to pose additional research questions and to request additional data from the files of the project. Reports of the results of the application of the Tennessee Technological University Teacher Evaluation Model for the period 1973-74 through 1981-82 are available through the ERIC system or from the Office of the Associate Dean of the College of Education at Tennessee Technological University.

The author of this report is indebted to the efforts of several individuals that have been extensively involved in working with the project during the past year. These individuals include: Elizabeth B. Harnish and Laura A. Wright, graduate assistants; Lisa A. Mullinix, secretary; and Sharon A. Heard, analyst. In addition thanks are extended to all principals, teachers, superintendents, and other school personnel that provided technical assistance, data, and allowed the project staff to work with them in various ways.

Jerry B. Ayers
Associate Dean
College of Education
June 1983

CHAPTER I

INTRODUCTION AND PROCEDURES

Beginning in 1970, a series of separate studies was begun related to the evaluation of students enrolled in and graduates of the teacher education programs of Tennessee Technological University. The research was systematic and designed to meet standards established by the National Council for the Accreditation of Teacher Education as well as to answer such questions as course effectiveness, the proper sequencing of courses, factors related to achievement, success of the graduates after entering the teaching profession, better methods of instruction, and the degree of achievement of the stated objectives of the teacher education program. It should be noted that there are companion studies designed to evaluate the programs for the preparation of school service personnel at the M.A. and Ed.S. levels. Currently these studies are being carried out by the Department of Administration, Supervision, and Curriculum and the Department of Educational Psychology and Counselor Education.

The works of Sandefur and Adams (1, 2, 3) led to the development of the Tennessee Technological University Teacher Evaluation Model. This model was employed to evaluate the graduates of the programs of the University designed to prepare teachers at the bachelor's and master's levels. During 1973-74 the Evaluation Model was implemented and operated through 1982-83 with funds available from the budget of the College of Education of the University. The results of the application of the model were summarized in a series of yearly reports (see Appendix, items 20, 27, 34, 37, 39, 45, 54, 59, 63). These reports and others are available through the Office of the Associate Dean of the College of Education of Tennessee Technological University or through the ERIC System.

The tenth year of the application of the Evaluation Model was initiated in the fall of 1982. The remainder of this chapter describes the purpose of the tenth year of the operation of the model and limitations of and the procedures used in conducting the major parts of the study (see Appendix 62). Chapter II contains a summary of the analyses of selected data accumulated on graduates who were participants in the project for the second and third year. Chapter III includes presentations and interpretations of the data collected as a result of a study of the 1982 graduates of the teacher education programs. Chapter IV contains a summary, conclusions, and recommendations and tentative plans for the eleventh year of the study to be conducted during 1983-84. The Appendix includes a list of all evaluative studies related to teacher education that have been conducted as a part of the efforts of the Office of the Associate Dean of the College of Education and through other units of the University.

Purposes

The purposes of the study reported in this document included the following:

1. To provide information for faculty and administrators concerned with teacher education programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development.

2. To aid in the process of making long-range plans for improving the total program of the University with particular emphasis on the teacher education program.

3. To continue the development and refinement of the Tennessee Technological University Teacher Evaluation Model.

Specific objectives to be accomplished as a part of this study were as follows:

1. To continue studying in a longitudinal manner those subjects who had previously participated in the application of the Model (1980-1981 through 1981-82).

2. To provide a descriptive profile of a sample of 1982 B.S. and M.A. graduates of the teacher education programs of Tennessee Technological University.

3. To determine relationships among selected variables that were measured as a part of the total study.

4. To provide comparisons between the graduates of the teacher education programs of Tennessee Technological University with those who might be considered as effective teachers as defined in the literature of teacher education.

5. To disseminate relevant research data to the faculty and administration of the University.

6. To provide information for curriculum evaluation and development based on empirical research data.

7. To continue to evaluate the procedures employed in the study and to make long-range plans for modifications and refinement of the basic Evaluation Model.

Limitations

The general limitations for this study were primarily concerned with sampling techniques:

1. Subjects for the study were individuals who were 1982 graduates of a bachelor's or master's program at Tennessee Technological University designed to prepare them as teachers, or they were individuals who participated in the study during the period 1980-1981 through 1981-82.

2. Subjects were teaching in the State of Tennessee within approximately a 75-mile radius of Cookeville, Tennessee. (Approximately 65 percent of all graduates of the teacher education programs of the University that were teaching resided within the specified geographical limits of the study.)

3. The subjects volunteered to participate in the study.

4. The subjects who participated in the study received the permission of their principals and superintendents.

5. The sample sizes of the 1980 and 1981 graduates were reduced each year by about 50 percent due to attrition from the teaching profession or moving out of the geographical limits of the study. Therefore, the findings of the study may be limited in their applicability to the population of graduates from the University and also other institutions.

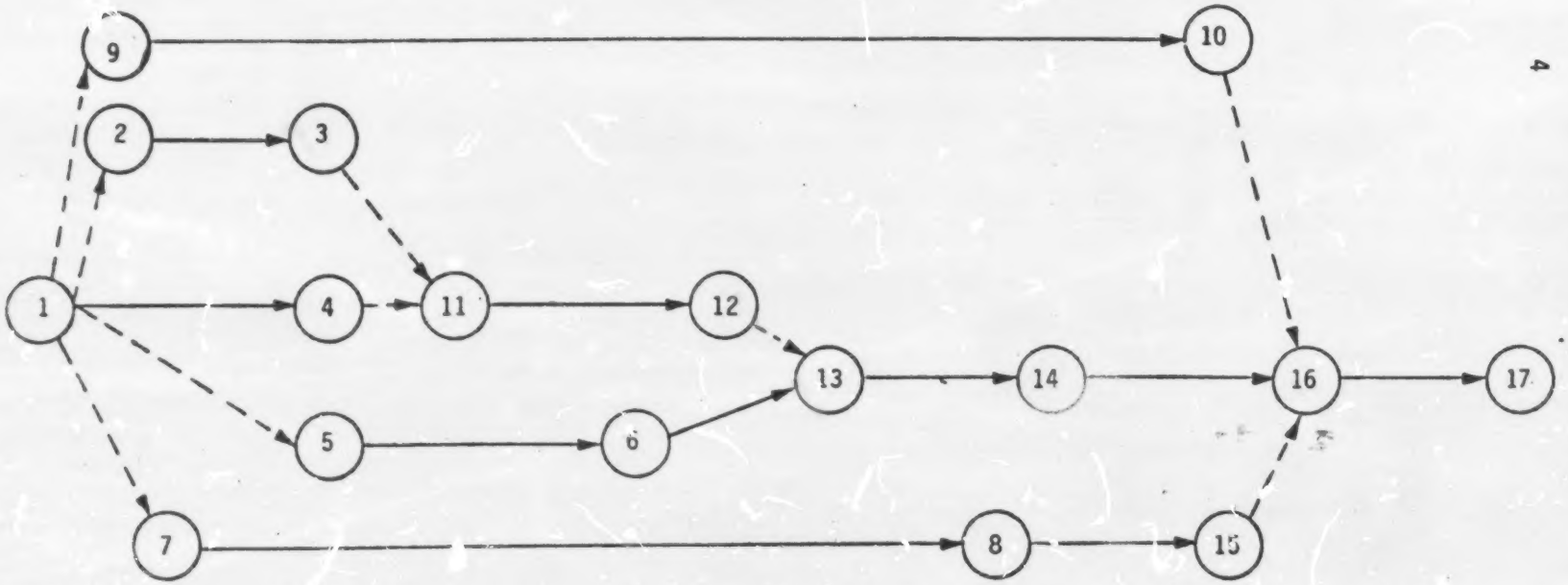
Limitations 1 through 4 above were imposed in order to make the study more feasible regarding the followup of the graduates. Voluntary participation was deemed necessary due to the extensive collection of data and completion of forms. The limitation of a 75-mile radius of Cookeville, Tennessee, was necessary because of the limited travel funds available and the time available for the research assistants to visit in the classrooms of the participating subjects.

Procedure

The purpose of this section was to provide the reader with a brief description of the procedures employed in collecting data utilized in this study. This section was concerned specifically with selection of subjects, implementation of the study, training of staff, and methods of data collection and analysis. Figure 1 shows a PERT chart of the major activities of the project from September 1982 through August 1983. In order to conserve space, the reader is referred to Report 82-1 (Appendix 62) for a more complete description of such topics as instrumentation and training of observers.

Selection of Subjects

Three groups of subjects participated in the 1982-83 phase of the project. The first group of individuals (1980 graduates) was participating in the project for the third year, while the second group (1981 graduates) was participating for the second year. The third group consisted of those individuals that received either the B.S. or M.A. in 1982. Table 1 shows a summary of the number of individuals (by year of graduation) participating in each phase of the study, and Table 2 shows a summary of the grade level in which the subjects were teaching during 1982-83. Table 3 shows a comparison of sample size across all years from which actual usable data were collected.



9/82 1/83 4/83 7/83

Summary of Activities

1-4 Finalize Plans for Visiting Subjects in 1980 and 1981 Phases of Study
2-3 Training of Observers
5-6 Survey All 1982 Graduates
7-8 Conduct Related Studies
9-10 Maintain Contact with Other Projects and Survey New Literature
11-12 Make School Visits on 1980-81 Graduates
6-13 Select Sample of 1982 Graduates for Study as Part of Followup
13-14 Make School Visits on 1982 Graduates
8-15 Prepare Reports of Related Studies
14-16 Complete Report on Main Study
16-17 Make Plans for Tenth Year of Followup

Figure 1. PERT Chart of Major Activities for 1982-83.

Table 1

NUMBER OF SUBJECTS BY YEAR OF GRADUATION PARTICIPATING IN EACH PHASE OF STUDY

Phase of Study	1980	1981	1982	Total
1980-1981	40/17	--	--	40/17*
1981-1982	19/8	35/12	--	54/20
1982-1983	13/6	22/3	29/18	64/27

*No. M.A./No. B.S.

Table 2

SAMPLE FOR INTENSIVE FOLLOWUP - 1982-1983

Year	K	1-3	4-7	8-12**	SPED	Total
1980	2/0	1/0	2/3	4/0	4/3	13/6*
1981	0/0	1/2	7/1	8/0	6/0	22/3
1982	3/3	3/4	5/2	10/6	8/3	29/18
Total	5/3	5/6	14/6	22/6	18/6	64/27

*No. M.A./No. B.S.
**Teaching areas: 2-Eighth grade all subjects, 3-Health and Physical Education, 5-Mathematics, 2-Science, 1-Music, 6-Vocational Subjects, 5-English, 4-Social Sciences.

Table 3

COMPARISON OF SAMPLE SIZES ACROSS ALL YEARS OF STUDY

Year of Graduation	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
1973	57	35	27	21	15	--	--	--	--	--
1974	--	48	26	22	14	9	--	--	--	--
1975	--	--	44	23	17	11	5	--	--	--
1976	--	--	--	26	16	11	6	--	--	--
1977	--	--	--	--	50	26	19	10	--	--
1978	--	--	--	--	--	45	22	12	--	--
1979	--	--	--	--	--	--	61	33	13	--
1980	--	--	--	--	--	--	--	57	27	19
1981	--	--	--	--	--	--	--	--	47	25
1982	--	--	--	--	--	--	--	--	--	47
Total	57	83	97	92	112	102	113	112	87	91

As a part of the routine followup activities of the Office of the Associate Dean, all 1982 graduates of the teacher education programs were contacted in the late fall of 1982 (205 B.S. graduates who were eligible for a teaching certificate and 137 M.A. graduates). As a result of this initial survey (Appendix 65), all graduates who were teaching within the defined geographical limits of the project were contacted by telephone and asked to participate in the study. A total of 18 B.S. and 29 M.A. graduates volunteered to participate (see Tables 1 and 2).

Figure 2 shows a map of selected portions of Tennessee. The numerals within each county indicate the number of individuals who participated in the study during the 1982-83 phase of the study. Table 4 shows a summary of the number of individuals by year of graduation participating from each county.

Instrumentation

Instrumentation for the 1982-83 phase of the study was identical to that used during the past several years of the project. The reader is referred to Report 82-1 (Appendix 62) for more information with regard to instrumentation.

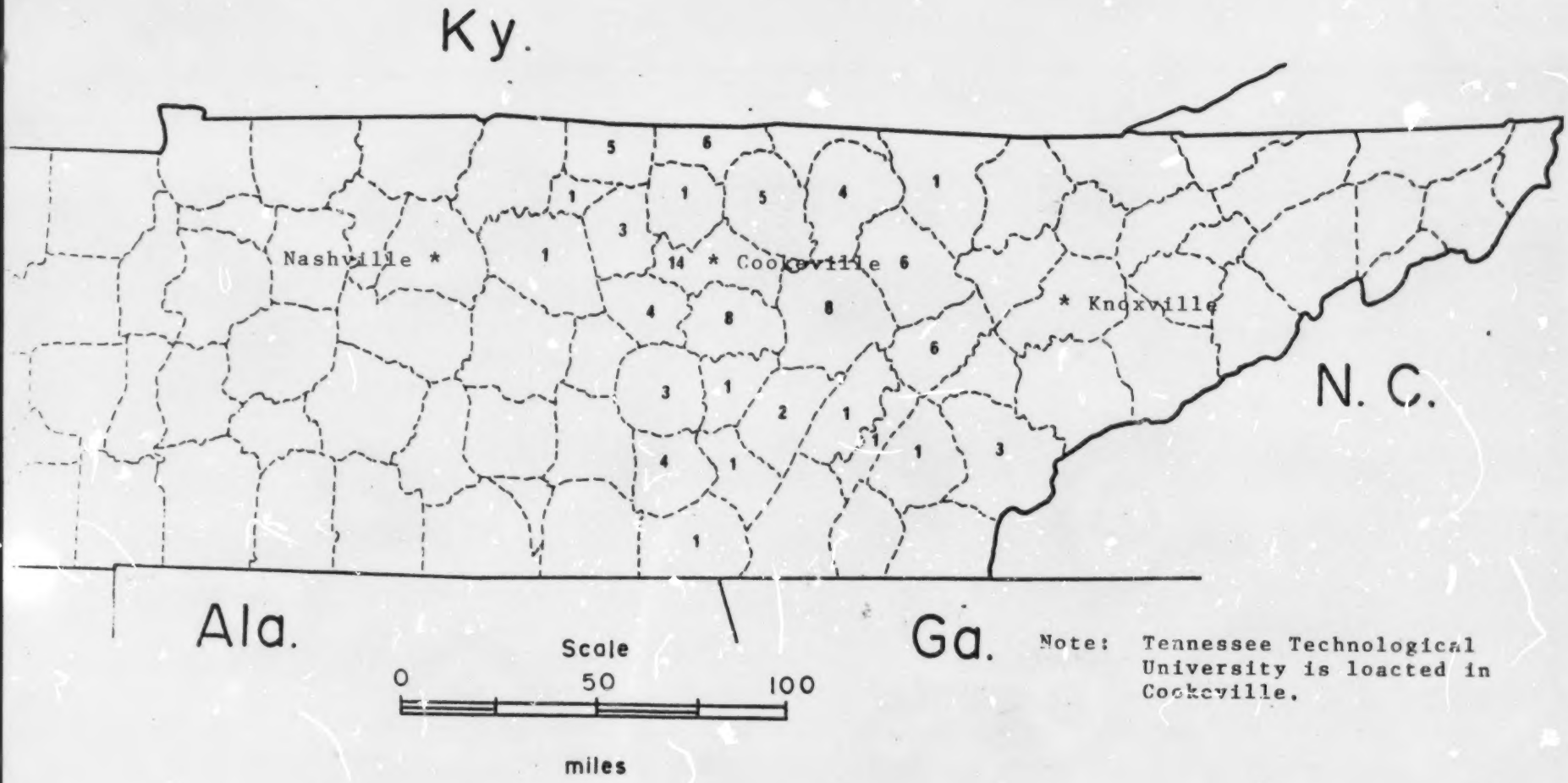


Figure 2. Number of Participants by County in 1982-83 Phase of the Study.

Table 4

NUMBER OF SUBJECTS BY DATE OF GRADUATION AND COUNTY IN WHICH TEACHING 1982-1983

County	1980	1981	1982	Total
Bledsoe	--	1	1	2
Clay	3	2	1	6
Cumberland	3	2	3	8
DeKalb	1	1	2	4
Fentress	--	--	4	4
Grundy	--	1	3	4
Jackson	1	--	--	1
McMinn	--	1	--	1
Macon	1	3	1	5
Marion	--	--	1	1
Meigs	--	1	--	1
Monroe	--	--	3	3
Morgan	1	2	3	6
Overton	2	1	2	5
Putnam	2	4	8	14
Rhea	1	--	--	1
Roane	1	1	4	6
Scott	--	--	1	1
Sequatchie	--	1	--	1
Smith	--	1	2	3
Trousdale	--	--	1	1
Van Buren	1	--	--	1
Warren	1	1	1	3
White	1	2	5	8
Wilson	--	--	1	1
Total	19	25	47	91

Training of Observers

The procedures for the training of observers were outlined in detail in Report 82-1 (Appendix 62).

Collection of Data

Data for this study were collected by mail surveys, interviews, and observations in the classrooms of graduates. Initially, all subjects were contacted by mail and dates were set for observational visits by the graduate research assistants (both previous subjects and new subjects in the study). These dates were verified with the appropriate administrative authorities in each school and school system. A letter explaining the project in detail was sent to all subjects, principals, and superintendents. The subjects, their principals, and superintendents were invited to make comments and suggestions for conducting the study.

References

1. Sandefur, J. T. An Illustrated Model for the Evaluation of Teacher Education Graduates, Washington: American Association of Colleges for Teacher Education, 1970.

2. Adams, Ronald D. Western Kentucky University's Teacher Preparation Evaluation Model, Phase I, Cycle I. Annual Report. Bowling Green, KY: Office of Educational Research, Western Kentucky University, 1972.

3. Sandefur, J. T. and Ronald D. Adams. "An Evaluation of Teaching: An Interim Research Report," Journal of Teacher Education, 27(1): 71-6, Spring 1976.

4. Nie, Norman., et al. Statistical Package for the Social Sciences, New York: McGraw-Hill Book Company, 1975.

Each subject was visited on at least one occasion by a trained (observer) graduate assistant. The observer spent approximately a half day in each subject's classroom and completed from two to six 20-minute periods of observation using a ten category system of interaction analysis. At the completion of all observations, the Classroom Observation Record and the Tuckman Teacher Feedback Form were completed.

The Student Evaluation of Teaching (SET-I) was administered to the students of teachers in grades 4 through 12. The Student Evaluation of Teacher (SET-II) was administered to students of subject's in grades K-3. While the students were completing the appropriate version of the SET, subjects who were participating in the project for the first year completed the California F-Scale.

The observer interviewed each graduate with regard to his/her opinions and ideas about the teacher preparation program of the University. Also, the observer asked each principal to complete the Teacher Evaluation by Supervisor form.

Pertinent data such as quality point average, National Teacher Examination scores, etc. were collected from the permanent records of all 1982 graduates (see Report 82-1 for more details relative to the collection of data).

Analyses of Data

Basic descriptive and inferential statistical methods were used to analyze the data. All data analyses were conducted using the Burroughs 6700 system available in the D. W. Mattson Computer Center on the campus of the University. The Statistical Package for the Social Sciences (Appendix 4) provided the basic programs for data analyses. The statistical techniques were described in more detail at the appropriate points in this report.

Summary

In summary, this chapter contains a brief overview of the total operation of the 1982-83 phase of the longitudinal study of the graduates of the teacher education programs of Tennessee Technological University. Included in this chapter was a summary statement of the major purposes of the project, limitations of the study, and major procedures employed in conducting the project. Data from the graduates were gathered from four major sources including self or personal, from supervisors and principals, students of the graduates, and by independent observers. Included in the chapter was a listing of the major instruments used in gathering data from the four primary sources. The major purposes and procedures of the project have remained virtually unchanged over the nine years of the study. It was felt the information available from this report, the companion reports completed during the period 1974 through 1982, and Report 82-1 would be useful to those individuals attempting to replicate this study. It should be noted that additional information and specifics related to methodology employed in this study were available from the Office of the Associate Dean of the College of Education.

CHAPTER II

COMPARISONS OF SECOND AND THIRD YEAR FOLLOWUP PARTICIPANTS

At the time of inception of the Tennessee Technological University Teacher Evaluation Model, data were gathered on each group of participants for up to five years. Beginning in 1979, data were collected for only three years because of financial limitations on the project and the lack of ability to interpret and use the data fully. The purpose of this chapter was to show some qualitative comparisons of data for second and third year participants in the project. It will be noted that the sample sizes are small; however, it is felt that the reader can gain some general ideas about the graduates of the University after they have been teaching for two to three years after receiving either the B.S. or M.A.

In order to simplify the tables the reader should keep in mind the following:

1. 2nd Year refers to those 1981 graduates who were participating in the project for the second year.
2. 3rd Year refers to those 1980 graduates who were participating in the project for the third year.
3. No comparisons were presented for bachelor's level graduates who were teaching in the secondary schools since the sample sizes had been reduced to only one or two in each group.

Personal Variables

Table 5 shows the means and standard deviations for the scores achieved by the graduates who were teaching in the elementary grades on the Weighted Commons Examination (from the NTE), American College Test, and the F-Scale. Those individuals with the M.A. had generally achieved higher mean scores on the NTE and ACT. F-Scale scores indicated the M.A. graduates were somewhat less authoritarian in their beliefs than the bachelor's graduates.

Table 5

COMPARISON OF WEIGHTED COMMONS SCORES (NTE), AMERICAN COLLEGE TEST SCORES, AND F-SCALE SCORES FOR SECOND AND THIRD YEAR B.S. AND M.A. ELEMENTARY GRADUATES

Area	2nd Yr. B.S.			3rd Yr. B.S.			2nd Yr. M.A.			3rd Yr. M.A.		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Wt. Comm.	2	517.0	29.7	5	542.6	83.0	5	600.8	63.9	5	594.6	91.8
F-Scale	3	113.0	22.7	5	111.8	18.4	10	102.0	17.5	7	97.9	26.6
ACT	3	15.0	0.0	4	14.8	4.0	6	20.8	2.6	5	19.4	4.7

Table 6 shows similar data for the M.A. graduates who had been in the study for more than one year and were teaching at the secondary level. The graduates who were in the study for the third year had achieved higher NTE scores than second year pariticipants. Third year participants appeared to be more open-minded in their beliefs than those who were participating in the study for the second year.

Table 6

COMPARISON OF WEIGHTED COMMONS SCORES (NTE), AMERICAN COLLEGE TEST SCORES, AND F-SCALE SCORES FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

Area	2nd Yr. M.A.			3rd Yr. M.A.		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Wt. Comm.	2	564.5	14.8	3	641.7	82.0
F-Scale	9	108.2	26.4	4	73.8	18.8
ACT	2	22.0	0.0	5	21.4	4.0

Principal's Ratings

In general principal ratings of third year B.S. graduates teaching in the elementary grades were higher for second year graduates. There appeared to be little difference in the ratings given second and third year M.A. graduates. Principals in the elementary schools tended to rate the master's graduates higher than the bachelor's level graduates. Table 7 shows a summary of the results of this part of the study.

Table 8 shows a comparison of the ratings given by secondary principals to second and third year M.A. graduates. In general the mean ratings were higher for third year graduates.

Student Evaluations

The SET-I was administered in the classrooms of graduates who were teaching in grades 4 through 8. Because of the small sample size, it was not possible to make meaningful comparisons for either the B.S. or M.A. graduates. The data were, therefore, omitted from this report. Table 9 shows a comparison between the second and third year M.A. graduates who were teaching at the secondary level. In general there were no differences in student ratings of the teachers.

Table 10 shows the results of administering the SET-II in the classrooms of teachers in grades K-3. The small sample sizes made it difficult to make meaningful interpretations of the data.

Table 7

COMPARISON OF PRINCIPALS' RATINGS FOR SECOND AND THIRD YEAR B.S. AND M.A. ELEMENTARY GRADUATES

Factor	2nd Yr. B.S. (N=3)		3rd Yr. B.S. (N=5)		2nd Yr. M.A. (N=11)		3rd Yr. M.A. (N=7)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Subject Matter Competence	3.7	0.6	4.4	0.5	4.5	0.8	4.6	0.5
II Relations with Students	4.0	1.0	4.4	0.5	4.8	0.4	4.6	0.5
III Appropriateness of Assignments	3.7	0.7	4.8	0.4	4.4	0.7	4.3	0.5
IV Overall Effectiveness	3.7	0.4	4.6	0.5	4.5	0.7	4.3	0.5

Table 8

COMPARISON OF PRINCIPALS' RATINGS FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

Factor	2nd Yr. M.A. (N=8)		3rd Yr. M.A. (N=5)	
	$\bar{X}$	SD	$\bar{X}$	SD
I Subject Matter Competence	4.6	0.5	4.5	0.5
II Relations with Students	4.8	0.5	5.0	0.0
III Appropriateness of Assignments	4.6	0.5	4.8	0.4
IV Overall Effectiveness	4.6	0.7	4.5	0.4

Table 9

COMPARISON OF SET-I SCORES FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

Factor	2nd Yr. M.A. (N=8)		3rd Yr. M.A. (N=5)	
	$\bar{X}$	SD	$\bar{X}$	SD
I Friendly and Cheerful	346.9	27.7	350.0	13.4
II Knowledgeable and Poised	347.6	24.1	350.5	17.0
III Lively and Interesting	296.9	52.6	302.0	42.6
IV Firm Control (Discipline)	301.0	26.2	288.6	28.9
V Non-Directive (Dem. Process)	250.3	53.4	248.6	39.2
Composite Score	308.5	30.3	308.0	15.1

Table 10

COMPARISON OF SET-II SCORES FOR SECOND AND THIRD YEAR B.S AND M.A. ELEMENTARY GRADUATES

Factor	2nd Yr. B.S. (N=8)		3rd Yr. B.S. (N=2)		2nd Yr. M.A. (N=3)		3rd Yr. M.A. (N=4)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Rapport	5.5	0.5	6.5	1.0	5.7	0.8	5.6	0.6
II Interactional Competence	4.5	0.1	4.9	1.2	4.1	0.4	4.7	0.9
III Stimulating Interactive Style (I + II)	10.1	0.6	11.4	1.1	9.8	1.1	10.3	1.4
IV Unreasonable Negativity	9.1	6.3	8.9	0.9	9.1	0.7	8.3	0.3
V Fosterance of Self-Esteem	6.9	0.3	7.1	0.4	6.5	1.3	7.2	0.8

Independent Observers

Data were collected by independent observers using three instruments. The remainder of this section was subdivided based on the particular instrument used to gather data.

Flanders Interaction Analysis

The mean values of five ratios derived from the use of Flanders Interaction Analysis in the classrooms of B.S. and M.A. graduates teaching in the elementary grades are shown in Table 11. The results are somewhat mixed, and no clear patterns were evident from the data.

Table 11

COMPARISON OF FLANDERS RATIOS FOR SECOND AND THIRD YEAR B.S. AND M.A. ELEMENTARY GRADUATES

Ratio	2nd Yr. B.S. (N=3)		3rd Yr. B.S. (N=6)		2nd Yr. M.A. (N=12)		3rd Yr. M.A. (N=7)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	0.75	0.15	1.14	1.12	0.71	0 42	0.69	0.60
i/d	0.43	0.06	0.83	0.41	0.62	0.28	0.57	0.38
ST/TT	0.75	0.40	0.55	0.18	0.58	0.28	0.62	0.34
Sil/Tot	0.42	0.27	0.14	0.08	0.32	0.24	0.44	0.36
Lec/Tot	0.27	0.08	0.34	0.18	0.36	0.28	0.32	0.14

Corresponding interaction analysis data for the M.A. graduates teaching at the secondary level are shown in Table 12. It appeared that third year graduates were using more indirect teaching techniques than second year graduates, and there also appeared to be more student talk in the classrooms of third year graduates.

Classroom Observation Record

Mean scores derived from use of the COR in the classrooms of the B.S. and M.A. graduates teaching in the elementary grades are shown in Table 13. In general, third year participants were rated slightly higher than second year participants. There were basically no differences between the B.S. and M.A. graduates.

Table 12

COMPARISON OF FLANDERS RATIOS FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

	2nd Yr. M.A. (N=10)		3rd Yr. M.A. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD
I/D	1.25	1.04	0.97	0.81
i/d	0.38	0.31	0.53	0.89
ST/TT	0.35	0.21	0.53	0.13
Sil/Tot	0.10	0.07	0.21	0.17
Lec/Tot	0.62	0.23	0.56	0.22

Table 13

COMPARISON OF COR FACTOR SCORES AND SECOND AND THIRD YEAR B.S. AND M.A. ELEMENTARY GRADUATES

Factor	2nd Yr. B.S. (N=3)		3rd Yr. B.S. (N=6)		2nd Yr. M.A. (N=12)		3rd Yr. M.A. (N=7)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	40.3	2.1	40.7	8.9	38.4	5.8	40.6	5.4
II	61.3	3.2	62.3	11.1	58.4	8.1	58.5	7.5
III	23.7	0.6	18.8	6.0	20.0	5.0	20.9	7.5

Mean COR factor scores for M.A. graduates teaching at the secondary level are shown in Table 14. In general third year M.A. graduates achieved higher scores than second year graduates.

Table 14

COMPARISON OF COR FACTOR SCORES AND SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

Factor	2nd Yr. M.A. (N=10)		3rd Yr. M.A. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD
I	37.3	6.0	39.2	7.2
II	55.2	15.1	55.8	9.7
III	19.7	5.8	21.8	3.4

Tuckman Teacher Feedback Form

Table 15 shows the results of the use of the Tuckman Teacher Feedback Form in the classroom of those graduates who were teaching in the elementary grades. In general there were no differences between second and third year graduates at the B.S. and M.A. levels, nor were there any differences between the B.S. and M.A. graduates as groups. Similar results were obtained for M.A. graduates teaching in the secondary grades. These data are shown in Table 16.

Discussion

An examination of the personal variables studied indicated that the M.A. graduates had achieved higher scores on the NTE and the ACT. When scores for the four groups were compared with those for all first year graduates who had participated in the previous nine years of the project, it was found that they were slightly lower.

Principal ratings were higher for the M.A. graduates than the B.S. level graduates. It appeared that the principals perceived M.A. level teachers as being better teachers than those with the bachelor's degree. Comparisons with ratings of all first year teachers who have participated in the study indicated few differences in perceived level of performance.

Student ratings of performance of the bachelor's level graduates were comparable with those ratings given first year teachers. Student ratings of M.A. level graduates were slightly higher for

Table 15

COMPARISON OF TUCKMAN RATINGS FOR SECOND AND THIRD YEAR B.S. AND M.A. ELEMENTARY GRADUATES

Factor	2nd Yr. B.S. (N=3)		3rd Yr. B.S. (N=2)		2nd Yr. M.A. (N=12)		3rd Yr. M.A. (N=7)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I Creativity	23.0	2.0	23.5	2.0	23.6	4.4	23.7	4.1
II Dynamism (Dominance of Energy)	23.0	2.0	26.5	4.6	24.4	2.7	24.6	2.4
III Organized Demeanor (Organization and Control)	30.3	2.1	32.3	3.9	31.8	5.1	31.0	4.7
IV Warmth and Acceptance	32.7	4.5	37.5	6.1	35.3	6.6	30.1	3.9

Table 16

COMPARISON OF TUCKMAN RATINGS FOR SECOND AND THIRD YEAR M.A. SECONDARY GRADUATES

	2nd Yr. M.A. (N=10)		3rd Yr. M.A. (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD
I Creativity	21.4	3.4	21.3	5.9
II Dynamism (Dominance of Energy)	23.8	3.3	22.5	4.8
III Organized Demeanor (Organization and Control)	31.1	5.4	31.3	5.2
IV Warmth and Acceptance	34.1	7.5	32.7	7.1

second and third year graduates when compared with all first year M.A. graduates. It appeared that students perceived second and third year teachers as being somewhat better than first year teachers.

Ratings given by independent observers were mixed. An examination of the ratios derived from Flanders Interaction Analysis indicated that second and third year teachers were performing at about the same level as first year teachers. However, an examination of the results of the administration of the Classroom Observation Record and the Tuckman Teacher Feedback Form indicated that second and third year teachers received lower ratings than first year teachers. No explanation can be offered for this phenomena.

In general it was found that second and third year teachers were functioning at a level comparable to or greater than for first year teachers. Attrition from the followup study, however, leads one to question the results of this aspect of the study. There are too many variables that cannot be controlled in a study of this nature.

What are the implications of this part of the study for improving the programs in teacher education at Tennessee Technological University? It is difficult to say. There is a definite need to continue the inservice aspects of the programs of the College of Education. In the early years in the classroom, there is an apparent need for additional help for teachers in developing teaching strategies, classroom management, and the like.

Summary

This chapter has presented the results of the followup of graduates who had received either the B.S. or M.A. and had participated in the application of the Tennessee Technological University Teacher Evaluation Model for the second and third year. The results of the study were presented in a qualitative manner and indicated that second and third year teachers were performing similar or at a slightly higher level than first year teachers. The results of the study were inclusive and provided only limited information that may be of use in improving the teacher education programs of the University.

CHAPTER III

PRESENTATION AND ANALYSES OF DATA FOR 1982 GRADUATES AND COMPARISONS WITH 1980 AND 1981 GRADUATES

Chapter III contains a presentation and analyses of data for those individuals who received the B.S. or M.A. in 1982 and were participating in the study for the first time. Also shown are comparisons of the data with other first year participants for the period 1980 through 1981. Initially 48 individuals (18 at the B.S. and 30 at the M.A. levels) agreed to participate in the study. Reasonably complete data were collected on all but one M.A. graduate. Since previous studies had indicated there were few differences in those individuals teaching in the elementary grades and those teaching at the secondary level, the data were combined.

This chapter is divided into five sections. The first section contains an analyses of the correlation of selected variables for the two groups. The second section shows comparisons between the B.S. and M.A. graduates. The third and fourth sections contain, respectively, comparisons of the data across three years for the B.S. and M.A. graduates. The fifth section includes a brief chapter summary.

Correlational Analyses

Table 17 shows the sample size, means, and standard deviations for selected data collected as a part of the study on those individuals who received the B.S. in 1983. Also shown is a correlation matrix for the variables. Since the sample size was relatively small, correlations of scores from the SET-I and SET-II were excluded from the analyses.

In many cases, the correlations may be suspect since the sample size was limited. In general there were significant positive correlations ($p < .05$) between the various cognitive variables (NTE scores, QPA, ACT scores, etc.). Also there were significant positive correlations between the cognitive variables and the Organization and Warmth and Acceptance Factors of the Tuckman Teacher Feedback Form. Significant negative correlations were found between the cognitive variables and the F-Scale. Significant positive correlations were found between the overall principal ratings and the warmth and acceptance and organization factors of the Tuckman. As would be expected, there were significant positive correlations between the various factors of the COR and the Tuckman. The correlation pattern evident in the present study corresponds with the patterns found in earlier years of the study.

Table 18 shows similar correlation data for those individuals who had received the M.A. Data from the SET-II were omitted because of the small sample size. The correlation pattern for the M.A. group was similar to that found for the B.S. graduates and similar to the patterns previously reported.

Table 17

CORRELATION MATRIX FOR SELECTED VARIABLES FOR 1982 B.S. GRADUATES*

	Factor	N	$\bar{x}$	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1.	Wt. Comm. (NTE)	16	553.0	51.4	100	76	81	65	22	-15	-37	-03	-60	53	11	-04	08	-23	15	20	20	14	-06	31	11
2.	ACT Comp.	14	16.1	3.8		100	65	47	12	10	-27	-08	-76	33	22	-10	-14	-20	15	24	-08	14	-10	47	11
3.	QPA	18	3.20	0.47			100	-92	42	-11	-02	19	-57	27	-01	-15	-09	-07	08	12	32	30	10	49	40
4.	Major QPA	18	3.44	0.40				100	43	-18	01	24	-29	28	-04	-18	-14	-09	10	13	42	34	11	54	51
5.	PRIN. I	17	4.1	0.7					100	54	53	64	-22	11	01	-12	-08	02	13	15	20	09	20	30	32
6.	PRIN. II	17	4.4	0.7						100	48	39	-26	-29	25	-14	-16	20	-02	-05	-32	-13	-10	04	-14
7.	PRIN. III	17	4.3	0.6							100	68	11	-13	-16	02	-32	-14	44	39	16	10	43	36	40
8.	PRIN. IV	17	4.2	0.8								100	-21	-19	-12	-01	-21	-02	30	31	16	-05	20	52	52
9.	F-Scale	14	101.6	22.1									100	-01	-20	28	05	-05	02	-13	31	-18	03	-44	-08
10.	I/D	18	1.87	3.88										100	-15	-45	-18	45	-02	00	-07	-11	-18	-15	-29
11.	i/d	18	0.82	0.54											100	27	-38	-80	22	15	-01	20	32	31	42
12.	ST/TT	18	0.72	0.38												100	-16	-58	-37	-41	-25	-30	06	-05	-00
13.	Sil/Tot	18	0.33	0.60													100	-47	-15	-08	19	-17	-34	-61	-62
14.	Lec/Tot	18	0.37	0.20														100	-29	-25	18	-30	-52	-48	-55
15.	COR-I	18	41.8	1.5															100	62	38	59	57	48	53
16.	COR-II	18	65.2	2.4																100	43	68	67	57	52
17.	COR-III	18	23.0	2.1																	100	29	22	24	20
18.	TUCK-I	18	21.9	4.1																		100	75	52	51
19.	TUCK-II	18	24.8	4.3																			100	57	62
20.	TUCK-III	18	30.8	7.4																				100	87
21.	TUCK-IV	18	34.3	7.4																					100

*Underline indicates a correlation significant at or beyond the .05 level. Decimal points on all correlations have been omitted.

Table 18

CORRELATION MATRIX FOR SELECTED VARIABLES FOR 1982 M.A. GRADUATES*

Factor	N	$\bar{x}$	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Wt. Comm. (NTE)	10	560.6	90.8	100	71	-11	-25	-21	-44	-17	-61	57	-81	57	-69	-60	06	-07	21	18	02	-06	-09	01	-02	-32	09	07
2. QPA	29	3.79	0.21		100	-05	-09	29	-03	-07	-11	02	-52	07	-25	-27	29	-07	-09	05	09	-19	04	02	02	-05	-06	-07
3. PRIN. I	26	4.4	0.6			100	76	57	69	-26	18	07	-02	10	-12	02	-05	04	21	20	-20	16	15	04	21	24	-03	-17
4. PRIN. II	26	4.5	0.6				100	58	65	32	26	-16	-09	-15	-20	-12	05	19	05	06	-21	43	27	14	06	07	12	16
5. PRIN. III	26	4.2	0.7					100	77	-28	19	30	-12	08	-09	03	41	12	01	-09	-07	43	27	14	06	07	26	14
6. PRIN. IV	26	4.4	0.7						100	-20	34	-05	-01	-18	08	08	33	07	-03	-19	01	-12	09	-09	32	16	17	13
7. F-Scale	27	103.3	17.2							100	-03	-04	25	-23	-21	12	-15	-53	-34	-27	69	-11	33	20	01	44	-03	01
8. SET-I-1	19	345.5	31.2								100	48	67	-21	74	86	45	18	-33	-33	08	28	29	39	23	12	35	24
9. SET-I-2	19	351.7	20.1									100	38	51	21	61	43	02	23	20	05	-04	-13	09	34	-14	24	-21
10. SET-I-3	19	304.3	33.3										100	-24	74	85	02	13	08	-04	-04	40	26	48	08	40	04	32
11. SET-I-4	19	297.3	22.0											100	-35	-02	16	09	44	34	-15	-29	-44	-34	13	-42	-14	-54
12. SET-I-5	19	259.6	54.5												100	86	23	-11	-33	-09	26	15	11	20	36	35	13	08
13. SET-I-Tot	19	311.8	22.9													100	35	06	-10	-05	11	21	10	29	35	21	18	06
14. I/D	29	1.09	0.79														100	30	-24	-31	18	-31	-09	-29	54	-04	35	21
15. i/d	29	0.60	0.42															100	23	-15	-58	01	-09	-13	-22	-22	06	30
16. ST/TT	29	0.65	0.49																100	58	-54	02	-20	-14	-17	-20	-52	-33
17. S11/Tot	29	0.21	0.24																	100	-42	11	-30	-12	13	-10	-64	-64
18. Lec/Tot	29	0.46	0.20																		100	-12	28	18	21	31	43	-01
19. COR-I	29	41.9	1.8																			100	60	70	-11	24	15	26
20. COR-II	29	66.3	3.4																				100	64	-09	39	37	30
21. COR-III	29	23.1	1.7																					100	-26	30	23	26
22. TUCK-I	29	22.8	5.4																						100	26	28	-04
23. TUCK-II	29	24.6	4.7																							100	16	16
24. TUCK-III	29	33.0	5.0																								100	63
25. TUCK-IV	29	35.6	6.3																									100

*Underline indicates a correlation significant at or beyond the .05 level. Decimal points on all correlations have been omitted.

Comparison of B.S. and M.A. Graduates

Table 19 shows a comparison between B.S. and M.A. graduates for certain career baseline variables. In general, M.A. graduates had achieved higher ACT Composite Scores as high school seniors and higher scores on the Weighted Common Examinations of the National Teacher Examinations. The differences were not significant. The M.A. graduates achieved a mean F-Scale score of 103.3 in comparison to a mean score of 101.6 for the B.S. graduates. This indicated the M.A. graduates were slightly more authoritarian in their beliefs. The difference was not significant.

Table 19

COMPARISON OF MEAN ACT COMPOSITE SCORES, WEIGHTED COMMON EXAMINATIONS SCORES, AND F-SCALE SCORES FOR 1982 B.S. AND M.A. GRADUATES

Degree	ACT			NTE			F-Scale		
	N	$\bar{x}$	SD	N	$\bar{x}$	SD	N	$\bar{x}$	SD
Bachelor's	14	16.1	3.8	16	553.0	51.4	14	101.6	22.1
Master's	7	16.7	5.5	10	560.6	90.8	27	103.3	17.2

Table 20 shows mean principal ratings for the two groups. There were no significant differences between the two groups on each of the four variables under study. In general, the M.A. graduates received slightly higher ratings. The mean ratings were comparable to those given to similar groups in earlier years of the study.

Comparisons of SET-I and SET-II scores for the two groups are shown, respectively, in Tables 21 and 22. There were no significant differences between the two groups on each of the items of the two instruments.

Mean ratios from the administration of Flander's Interaction Analysis are shown in Table 23. The B.S. graduates received higher mean ratings on the indirect to direct teaching ratios. The differences were not significant. Table 24 shows a comparison of the mean percentage of time spent by the subjects (B.S. and M.A.) acting in each of the ten interaction analysis categories. The data were divided by grade level. In all cases, the M.A. subjects appeared to be using more direct teaching techniques than the B.S. subjects. Other differences were negligible.

Table 20

COMPARISON OF MEAN PRINCIPALS' RATINGS FOR 1982 B.S. AND M.A. GRADUATES

Factor	B.S. (N=17)		M.A. (N=26)	
	$\bar{x}$	SD	$\bar{x}$	SD
I Subject Matter Competence	4.1	0.7	4.4	0.6
II Relations with Students	4.4	0.7	4.5	0.6
III Appropriateness of Assignments	4.3	0.6	4.2	0.7
IV Overall Effectiveness	4.2	0.8	4.4	0.7

Table 21

COMPARISON OF MEAN SET-I SCORES FOR 1982 B.S. AND M.A. GRADUATES

Factor	B.S. (N=8)		M.A. (N=19)	
	$\bar{x}$	SD	$\bar{x}$	SD
I Friendly and Cheerful	342.3	31.8	345.5	31.2
II Knowledgeable and Poised	345.0	41.3	351.7	20.1
III Lively and Interesting	313.9	37.3	304.3	33.3
IV Firm Control (Discipline)	312.4	24.8	297.3	22.0
V Non-Directive (Democratic Process)	267.5	38.7	259.6	54.5
Composite Score	325.3	40.6	311.8	22.9

Table 22

COMPARISON OF MEAN SET-II SCORES FOR 1982 B.S. AND M.A. GRADUATES

Factor	B.S. (N=8)		M.A. (N=11)	
	$\bar{x}$	SD	$\bar{x}$	SD
I Rapport	5.86	0.56	5.60	0.58
II Interactional Competence	4.67	0.46	4.65	0.38
III Stimulating Interaction Style (Comb. of I & II)	10.53	0.88	10.26	0.79
IV Unreasonable Negativity	8.56	0.47	8.03	0.92
V Fosterance of Self Esteem	6.87	0.70	6.85	0.54

Table 23

COMPARISON OF FLANDERS RATIOS FOR 1982 B.S. AND M.A. GRADUATES

Ratio	B.S. (N=18)		M.A. (N=29)	
	$\bar{x}$	SD	$\bar{x}$	SD
I/D	1.87	3.88	1.09	0.79
i/d	0.82	0.54	0.60	0.42
ST/TT	0.72	0.38	0.65	0.49
Sil/Tot	0.33	0.60	0.21	0.24
Lec/Tot	0.37	0.20	0.46	0.20

Table 24

AVERAGE PERCENTAGE OF TIME SPENT BY SUBJECTS (AT VARIOUS GRADE LEVELS) ACTING IN EACH OF THE TEN INTERACTION CATEGORIES

Grade Level	1	2	3	4	5	6	7	8	9	10
Kindergarten										
B.S. (N=3)	0.0	3.8	7.4	13.4	16.1	16.2	0.6	35.1	3.7	3.8
M.A. (N=4)	0.1	6.1	2.1	6.5	17.5	19.6	0.9	9.6	17.4	20.3
Grades 1-3										
B.S. (N=4)	0.0	2.5	10.3	17.1	11.4	21.5	0.6	39.9	1.8	4.2
M.A. (N=2)	0.0	2.3	4.6	11.8	27.6	16.2	0.3	20.9	28.4	7.9
Grades 4-6										
B.S. (N=2)	0.0	8.5	0.6	15.5	15.3	5.8	0.1	31.4	6.5	16.5
M.A. (N=3)	0.0	3.8	7.3	18.0	27.9	8.9	0.0	25.7	4.2	2.6
Grades 7-9										
B.S. (N=1)	0.0	0.2	0.2	1.3	22.2	6.6	2.3	3.4	35.4	28.3
M.A. (N=6)	0.0	2.8	3.5	8.9	37.4	7.4	0.2	28.9	3.3	6.8
Grades 10-12										
B.S. (N=5)	0.1	4.3	2.9	8.6	32.4	8.9	0.5	17.2	4.3	20.9
M.A. (N=6)	0.1	4.4	3.6	13.7	42.2	7.6	0.1	15.3	5.0	8.2
Special Educ.										
B.S. (N=3)	0.1	9.1	0.6	13.0	15.9	10.7	0.1	34.2	7.2	9.1
M.A. (N=8)	0.1	7.1	1.7	10.9	20.6	9.9	0.3	27.1	12.0	10.5
Total for All Grades										
B.S. (N=18)	0.0	4.9	4.5	12.4	19.8	10.7	0.5	28.9	6.1	12.3
M.A. (N=29)	0.1	4.8	3.3	11.3	29.4	10.6	0.3	22.0	9.8	9.6

Results from the administration of the Classroom Observation Record are shown in Table 25. There were no differences between the B.S. and M.A. graduates. Table 26 shows the results of the use of the Tuckman Teacher Feedback Form. M.A. graduates were rated slightly higher (n.s.) than B.S. graduates.

Table 25

COMPARISON OF MEAN COR FACTOR SCORES FOR 1982 B.S. AND M.A. GRADUATES

Factor	B.S. (N=18)		M.A. (N=29)	
	$\bar{x}$	SD	$\bar{x}$	SD
I	41.8	1.5	41.9	1.8
II	65.2	2.4	66.3	3.4
III	23.0	2.1	23.1	1.7

Table 26

COMPARISON OF MEAN TUCKMAN FACTOR SCORES FOR 1982 B.S. AND M.A. GRADUATES

Factor	B.S. (N=18)		M.A. (N=29)	
	$\bar{x}$	SD	$\bar{x}$	SD
I Creativity	21.9	4.1	22.8	5.4
II Dynamism (Dominance of Energy)	24.8	4.3	24.6	4.7
III Organized Demeanor (Organization and Control)	30.8	6.1	33.0	5.0
IV Warmth and Acceptance	34.3	7.4	35.6	6.3

In summary the M.A. graduates received slightly higher scores and ratings than the B.S. graduates. However, the differences were not significant. It might be concluded that the M.A. graduates were better teachers. The question is, however, did their level of maturity and teaching experience make the difference?

Comparison of First Year B.S. Graduates 1980-82

This section contains a summary of the results of the comparisons of first year B.S. graduates for the period 1980 through 1982. The analysis of variance technique was employed to determine differences between the three groups.

Table 27 shows a comparison of scores from the ACT, NTE, and F-Scale for the three groups. In general NTE scores and ACT scores have dropped (n.s.) over the past three years. F-Scale scores have also decreased over the three year period indicating that the more recent graduates were more open-minded in their beliefs.

Table 27

COMPARISON OF ACT COMPOSITE, WEIGHTED COMMON EXAMINATIONS SCORES OF THE NTE, AND F-SCALE SCORES FOR FIRST YEAR B.S. GRADUATES 1980-82

Test	1980			1981			1982		
	N	$\bar{x}$	SD	N	$\bar{x}$	SD	N	$\bar{x}$	SD
ACT	11	16.0	4.1	10	17.2	3.6	14	16.1	3.8
NTE	14	565.5	91.8	9	518.3	67.0	16	553.0	90.8
F-Scale	15	111.5	16.4	10	107.9	20.4	14	101.6	22.1

An examination of the mean ratings given by principals (see Table 28) indicated there were no differences across the three groups. Mean ratings for the four variables across time have remained nearly constant.

Results from the administration of the SET-I are shown in Table 29. It should be noted that the sample size for the 1981 graduates was only three. Comparisons of the 1980 and 1982 groups indicated no significant differences. However, the composite score for the 1982 group was greater than for the 1980 group.

Table 28

COMPARISON OF MEAN PRINCIPALS RATINGS FOR FIRST YEAR B.S. GRADUATES 1980-82

Factor	1980 (N=16)		1981 (N=7)		1982 (N=39)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Subject Matter Competence	4.3	0.7	4.4	0.5	4.1	0.7
II Relations with Students	4.5	0.7	4.4	0.5	4.4	0.7
III Appropriateness of Assignments	4.4	0.5	4.4	0.5	4.3	0.6
IV Overall Effectiveness	4.3	0.6	4.4	0.5	4.2	0.8

Table 29

COMPARISON OF MEAN SET-I SCORES FOR FIRST YEAR B.S. GRADUATES 1980-82

Factor	1980 (N=11)		1981 (N=3)		1982 (N=8)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Friendly and Cheerful	329.0	59.3	354.7	9.0	342.3	31.8
II Knowledgeable and Poised	327.1	45.7	327.0	48.8	345.0	41.3
III Lively and Interesting	293.9	68.7	331.7	22.0	313.9	37.3
IV Firm Control (Discpline)	318.3	57.4	269.7	56.0	312.4	24.8
V Non-Directive (Democratic Process)	256.3	60.2	241.3	13.3	267.5	38.7
Composite Score	304.9	39.7	280.3	45.5	325.3	40.6

SET-II mean scores are shown in Table 30. There were no significant differences among the three groups.

Table 30

COMPARISON OF MEAN SET-II SCORES FOR FIRST YEAR B.S. GRADUATES 1980-82

Factor	1980 (N=4)		1981 (N=4)		1982 (N=8)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Rapport	6.06	0.09	5.24	0.11	5.86	0.56
II Interactional Competence	4.89	0.65	4.43	0.27	4.67	0.46
III Stimulating Interaction Style (Comb. of I & II)	10.96	0.73	9.67	0.21	10.53	0.88
IV Unreasonable Negativity	8.97	0.80	9.32	0.24	8.56	0.47
V Fosterance of Self-Esteem	6.74	1.27	5.64	2.15	6.87	0.70

Table 31 shows mean ratios from the use of Flanders Interaction Analysis. The 1982 group was using significantly ($p < .05$) more indirect teaching techniques than the 1980 group. There were no significant differences in the other teaching ratios among the three groups.

Mean COR factor scores are shown in Table 32. There were no differences among the three groups. Mean scores derived from the administration of the Tuckman Teacher Feedback Form are shown in Table 33. Even though there were no significant differences, the 1982 group received lower mean ratings than the 1980 and 1981 groups.

In summary there were few differences across the three groups of B.S. graduates. In general, NTE and ACT scores have declined, but other scores and ratings from the instrumentation would tend to indicate that the 1982 graduates were perceived in a manner similar to earlier graduates. The reader should keep in mind that the sample sizes for some of the groups were less than ten. This could lead to invalid conclusions.

Table 31

COMPARISON OF MEAN FLANDERS RATIOS FOR FIRST YEAR B.S. GRADUATES 1980-82

Ratio	1980 (N=16)		1981 (N=10)		1982 (N=18)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I/D	0.90	0.56	1.15	1.74	1.87	3.88
i/d	0.71	0.44	0.68	0.61	0.82	0.54
ST/TT	0.91	0.99	0.47	0.25	0.72	0.38
Sil/Tot	0.95	1.53	0.52	0.45	0.33	0.60
Lec/Tot	0.33	0.16	0.31	0.13	0.37	0.20

Table 32

COMPARISON OF MEAN COR SCORES FOR FIRST YEAR B.S. GRADUATES 1980-82

Factor	1980 (N=16)		1981 (N=10)		1982 (N=18)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I	40.3	3.6	42.0	1.6	41.8	1.5
II	62.3	4.6	64.4	2.3	65.2	2.4
III	22.0	2.7	22.9	2.0	23.0	2.1

Table 33

COMPARISON OF MEAN TUCKMAN SCORES FOR FIRST YEAR B.S. GRADUATES 1980-82

Factor	1980 (N=15)		1981 (N=10)		1982 (N=18)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Creativity	28.2	4.1	29.4	7.1	21.9	4.1
II Dynamism (Dominance of Energy)	31.6	5.0	33.6	4.5	24.8	4.3
III Organized Demeanor (Organization and Control)	33.9	2.7	35.3	2.7	30.8	6.1
IV Warmth and Acceptance	34.9	3.4	35.3	2.3	34.3	7.4

Comparison of First Year M.A. Graduates 1980-82

This section contains a summary of the results of comparisons of first year M.A. graduates for the period 1980 through 1982. The analysis of variance technique was employed to determine differences between the three groups.

Table 34 shows a comparison of scores from the ACT, NTE, and F-Scale for the three groups. The 1982 group had achieved lower mean scores on the NTE, ACT, and F-Scale than the 1980 and 1981 groups. There were no significant differences among the three groups.

Table 34

COMPARISON OF ACT COMPOSITE, WEIGHTED COMMON EXAMINATIONS SCORES OF THE NTE, AND F-SCALE SCORES FOR FIRST YEAR M.A. GRADUATES 1980-82

Test	1980			1981			1982		
	N	$\bar{x}$	SD	N	$\bar{x}$	SD	N	$\bar{x}$	SD
ACT	18	18.7	5.3	14	19.6	4.3	7	16.7	5.5
NTE	16	567.8	85.3	9	566.1	68.5	10	560.6	90.8
F-Scale	38	95.2	23.6	30	106.0	21.4	27	103.3	17.2

Mean ratings given by principals are shown in Table 35. There were no significant differences in the three groups on each of the four variables, nor were there any trends in evidence.

Comparisons of SET-I and SET-II mean scores are shown, respectively, in Tables 36 and 37. There were no significant differences in the three groups for scores on either instrument.

Results of the use of Flanders Interaction Analysis are shown in Table 38. There was a significant difference in the silence to total teaching ratio for the three groups ($p < .01$). There was significantly less silence in the classrooms of the 1982 graduates than the 1980 graduates. There were no differences in the other ratios. Comparisons of mean factor scores from the Classroom Observation Record are shown in Table 39. There were no differences among the three groups. Although the differences were not significant, the 1982 graduates were rated lower than the 1980 and 1981 graduates on the factors of Creativity and Dynamism as measured by the Tuckman Teacher Feedback Form (see Table 40).

Table 35

COMPARISON OF MEAN PRINCIPALS RATINGS FOR FIRST YEAR M.A. GRADUATES 1980-82

Factor	1980 (N=39)		1981 (N=33)		1982 (N=26)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Subject Matter Competence	4.3	0.7	4.4	0.6	4.4	0.6
II Relations with Students	4.5	0.7	4.5	0.7	4.5	0.6
III Appropriateness of Assignments	4.2	0.6	4.3	0.6	4.2	0.7
IV Overall Effectiveness	4.3	0.5	4.3	0.6	4.4	0.7

Table 36

COMPARISON OF MEAN SET-I SCORES FOR FIRST YEAR M.A. GRADUATES 1980-82

Factor	1980 (N=26)		1981 (N=23)		1982 (N=19)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Friendly and Cheerful	344.0	65.5	355.1	27.6	345.5	31.2
II Knowledgeable and Poised	350.5	33.3	359.6	14.7	351.7	20.1
III Lively and Interesting	287.7	50.1	307.4	44.3	304.3	33.3
IV Firm Control (Discipline)	309.6	48.1	311.5	34.2	297.3	22.0
V Non-Directive (Democratic Process)	253.5	52.6	268.2	33.0	259.6	54.5
Composite Score	309.6	29.7	317.7	20.4	311.8	22.9

Table 37

COMPARISON OF MEAN SET-II SCORES FOR FIRST YEAR M.A. GRADUATES 1980-82

Factor	1980 (N =8)		1981 (N=8)		1982 (N=11)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Rapport	5.39	0.50	6.07	1.08	5.60	6.58
II Interactional Competence	4.45	0.73	4.46	0.52	4.65	0.38
III Stimulating Interaction Style (Comb. of I & II)	9.84	0.95	10.54	1.43	10.26	0.79
IV Unreasonable Negativity	8.19	1.47	9.26	1.14	8.03	0.92
V Fosterance of Self-Esteem	6.68	0.52	6.64	1.05	6.85	0.54

Table 38

COMPARISON OF MEAN FLANDERS RATIOS FOR FIRST YEAR M.A. GRADUATES 1980-82

Ratio	1980 (N=40)		1981 (N=32)		1982 (N=29)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I/D	1.01	1.35	1.21	1.68	1.09	0.79
i/d	0.59	0.36	0.52	0.48	0.60	0.42
ST/TT	0.71	0.67	0.50	0.37	0.65	0.49
Sil/Tot	1.02	2.43	0.30	0.33	0.21	0.24
Lec/Tot	0.39	0.16	0.48	0.24	0.46	0.20

Table 39

COMPARISON OF MEAN COR SCORES FOR FIRST YEAR M.A. GRADUATES 1979-81

Factor	1980 (N=40)		1981 (N=33)		1982 (N=29)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I	41.1	3.4	42.2	1.4	41.9	1.8
II	65.0	3.7	66.1	3.0	66.3	3.4
III	22.8	2.6	23.6	1.7	23.1	1.7

Table 40

COMPARISON OF MEAN TUCKMAN SCORES FOR FIRST YEAR M.A. GRADUATES 1980-82

Factor	1980 (N=40)		1981 (N=32)		1982 (N=29)	
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
I Creativity	28.9	6.8	31.5	5.5	22.8	5.4
II Dynamism (Dominance of Energy)	30.7	6.7	33.8	3.7	24.6	4.7
III Organized Demeanor (Organization and Control)	34.3	4.0	36.3	1.8	33.0	5.0
IV Warmth and Acceptance	34.4	4.0	35.9	2.3	35.6	6.3

In summary there were few significant differences across the three groups of M.A. graduates. In general, the 1982 graduates achieved slightly lower scores and ratings than the other groups.

Summary

This chapter contains an overview of the results of the tenth year of the application of the Tennessee Technological University Teacher Evaluation Model to 1982 graduates of the teacher education programs of the University. The graduates were teaching across the full spectrum of the grades (K-12). However, based on the results of earlier work, it was found that there were few differences between elementary and secondary teachers. Therefore, the data were combined to increase sample sizes.

Correlational analyses of the variables for the two groups were similar to those reported in earlier years of the study. Career baseline data for the two groups were similar to those reported in the past three years, and there were no significant differences. An examination of the various measures indicated there were no significant differences between the first year B.S. and M.A. graduates. However, in general, the M.A. graduates achieved higher scores and ratings. Comparisons of first year B.S. graduates for the period 1980 through 1982 indicated there were few differences across the three groups. Similar results were evident for the M.A. graduates.

CHAPTER IV

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND FUTURE PLANS

The objectives of Chapter IV were fourfold: (1) to provide a brief summary of the total evaluation study conducted in 1982-83; (2) present a summary of the major conclusions of the study for the year; (3) to present recommendations based on the conclusions of the study; and (4) to provide a summary of the plans for the continuation of the study during 1983-84.

Summary

Three groups of subjects (graduates of the teacher education programs of Tennessee Technological University) served as subjects for the study. The sample sizes by year of graduation were as follows: 1980--19, 1981--25, and 1982--47 (including 18 B.S. and 39 M.A. graduates). Detailed data were collected on each subject by use of standardized instruments and specially constructed questionnaires administered by trained graduate research assistants. Also, personal data about each graduate were collected from University records. Basic instrumentation and procedures for the study were pilot tested during the first year of the study and have remained essentially unchanged. The instrumentation for the current year included: (1) University permanent records and transcript information, (2) principal's evaluation of each subject, (3) administration of the California F-Scale (to those individuals participating in the study for the first time) to measure individual prejudices and anti-democratic tendencies, (4) administration of the Classroom Observation Record and the Tuckman Teacher Feedback Form, (5) administration of either the Student Evaluation of Teaching or the Student Evaluation of Teacher, and (6) a ten category interaction analysis system to record classroom behavior. All data obtained in the study were classified, coded and keypunched for analyses. Descriptive statistics, intercorrelations, and comparisons were computed. The major findings of the study were divided into three major parts, e.g., an examination of second and third year participants in the study, comparisons of first year subjects across three years and comparisons of B.S. and M.A. level graduates.

The major findings of the study for the first year subjects (1982 graduates) were similar to those reported throughout the first nine years of the project. Comparisons made between the B.S. and M.A. graduates indicated few differences. However, the general trend indicated that those individuals with the M.A. were functioning at a higher level. A comparison of first year data across three years indicated there were few differences in the three groups. The sample sizes were relatively small for the data collected on the second and third year participants. Therefore, it was difficult to make any inference from the data. It did

appear, however, that those individuals who had remained in the study achieved higher ratings than first year participants.

Based on the findings of the study, several conclusions were advanced and recommendations made for continuation of the study. These follow in the next sections of this chapter.

Conclusions

Following are the major conclusions of the study based on the findings of the tenth year of operation of the project. Additional analyses of the data are planned that may make other conclusions possible. This section is divided into three parts: Use of the Evaluation Model, Evaluation of the 1982 Graduates, and Comparison of Data Across Time.

Use of the Evaluation Model

(1) The plan of evaluation outlined in this report appeared to be useful in gathering information for modifying and improving the programs of teacher education at Tennessee Technological University.

(2) Instrumentation employed in the study appeared to be valid and provided essential information with regard to the graduates of the teacher education programs.

(3) Modifications can be made in the original model that can lead to more valid and useful information for an institution wishing to replicate the plan of evaluation.

(4) Additional ways need to be found to facilitate the use of the reports for curriculum improvement.

Evaluation of 1982 Graduates

(1) The B.S. and M.A. subjects who participated in the study for the first year in 1982-83 appeared to exhibit characteristics similar to their counterparts who had participated in earlier phases of the project.

(2) B.S. subjects who participated in the study for the first time during 1982-83 had achieved mean scores on the ACT prior to entering the University that were lower when compared to other students who entered the University in 1979. Also mean ACT scores were lower than for first year participants in 1980 and 1981.

(3) Principals' ratings of performance of the graduates tended to agree with the data collected through the use of the Student Evaluation of Teaching or the Student Evaluation of Teacher, the Classroom Observation Record, and the Tuckman Teacher Feedback Form.

(4) Overall scores achieved by the subjects on the National Teacher Examinations placed them at the 50th percentile which is comparable to other groups of graduates who had participated in the study.

(5) Many of the characteristics reported in the literature of good teachers were noted as a result of the administration of the Classroom Observation Record.

(6) The subjects in the study appeared to be using more indirect than direct teaching in their classrooms. Indirect/Direct ratios, based on the interaction analysis system used were higher than for other comparable groups of teachers.

(7) In general, first year M.A. subjects received comparable or higher ratings than B.S. subjects. Even though the differences were not significant, there was a trend indicating that individuals, after receiving the master's degree were better prepared at the time of entrance into the classroom.

The subjects of this study possessed many of the characteristics of good teachers as reported in the literature. As might be expected, it was difficult to identify specific problems. Principals praised the subjects as did their students. However, it must be kept in mind that the subjects who participated in this study were volunteers. Therefore, some bias was introduced into the total study that may make some of the conclusions and findings invalid when applied to the total population of graduates.

Comparisons of Data Across Time

(1) The 1982 B.S. and M.A. graduates of the teacher education programs of the University were functioning at a level comparable with first year 1980 and 1981 graduates.

(2) Second and third year participants in the study were functioning at or slightly above the levels reported when they were in their first year in the study.

Recommendations

Based on the findings and conclusions of the study, it was felt the following recommendations were warranted. These recommendations centered largely around the continuation and modification of the study. It was left to the reader to make recommendations relative to his/her individual problems and concerns and toward needed changes in the teacher education program of the institution.

(1) The basic plan outlined in this report should be replicated during 1983-84 adding another group of subjects who completed the B.S. or M.A. requirements in 1983.

(2) Continuing contact should be maintained with other institutions and agencies pursuing similar projects and the literature related to teacher evaluation should be continuously monitored.

(3) There is a need to identify more reliable and valid instruments to collect basic data.

(4) Further analyses of the data should be made employing more sophisticated statistical techniques.

(5) Faculty of the University and other individuals should be encouraged to review the report and to request additional data analyses to fit their individual needs.

(6) Uses of the data in the development and modification of curricula should be encouraged by the administration of the University.

(7) A more extensive data bank of information on all students in the teacher education programs should be established.

(8) Other studies supportive of the evaluation model should be initiated.

Plans for the Continuation of the Study During 1983-84

During 1983-84, particular emphasis will be placed on studies of the graduates of the teacher programs for the period 1981 through 1983. Subjects who graduated prior to 1981 will be dropped from further study as per the design of the project. The potential population of 1981 and 1982 graduates was 72. In addition, a sample of approximately 50 1983 graduates will be added to the study.

Figure 2, page 4, shows an abbreviated PERT chart for the major activities of the project during 1982-83. Tentatively this same plan will be followed during 1983-84. Initially two graduate assistants will engage in intensive studies of the use of the various classroom observation instruments between mid-September and mid-October. Concurrent with these activities, a schedule of visitation will be developed for the 1981 and 1982 graduates that have previously participated in the study. Of the 72 individuals who have previously participated in the study, it is anticipated that about 40 to 45 percent will drop out for a variety of reasons. The remaining subjects will be visited starting about the 25th of October 1983 and continue into December or early January 1984.

During the early part of October 1983, a survey questionnaire will be sent to all 1983 graduates (fall 1982, winter 1983, spring 1983, and summer 1983) of the teacher education programs of the University. All 1983 B.S. and M.A. education graduates teaching within a 65-75 mile radius of the University will be asked to participate in the study. It is anticipated that a sample of 20

to 25 B.S. graduates and 30 to 35 M.A. graduates will be selected for inclusion in the study. A schedule of visitation will be prepared in the early winter of 1983, and visits for purposes of observation and gathering baseline data will be carried out during the winter and spring of 1984.

Beginning in the late spring and continuing into the summer of 1984, data analyses will be made and a report of the eleventh year activities of the project will be prepared. The report will include detailed comparisons with the results obtained in previous years. During 1983-84, time permitting, a series of special studies will be completed that will lend extra data to the total project.

In the past years other evaluation systems have been developed by such agencies as the Georgia Department of Education, the Florida Department of Education, and various universities. These projects will be monitored during 1983-84 with the view of modifying or restructuring the Tennessee Technological University Teacher Evaluation Model. Also, liaison will be maintained with the Teacher Education Program Followup group based in the Research and Development Center for Teacher Education at the University of Texas at Austin.

Long Range Plans

Based on the high level of acceptance by the University and the interest shown by other groups, the project has been integrated into the total operation of the teacher education program. Teacher followup evaluations will continue at Tennessee Technological University on an indefinite basis. It is anticipated the project will be improved and will continue to be recognized as a project of national significance.

APPENDIX

REPORTS AND STUDIES RELATED TO THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

1. Ayers, Jerry B. Report 1-Restudy. A Survey of the Graduates of the Teacher Preparation Programs of Tennessee Technological Univeristy for the Period 1965 through 1969, Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 49 pp.

2. Faculty of the College of Education. Report II-Restudy. Objectives of the Teacher Preparation Program, Volume I, Volume II, and Volume III. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 910 pp. Out of print.

3. Ayers, Jerry B. Report III-Restudy. A Report of Four Surveys of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 through 1970. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 39 pp.

4. Ayers, Jerry B. "Predicting Quality Point Averages in Master's Degree Programs in Education," Educational and Psychological Measurement, 31:491-95, 1971.

5. Ayers, Jerry B. A Survey of Student Teachers at Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 7 pp.

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